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ABSTRACT

There are varied opinions on the relationship between the circulation penetration of the American daily newspapers and certain demographic indicators. Previous studies have treated the growth of circulation figures by utilizing gross national data and have indicated the role newspaper circulation plays in defining the limits of major urban centers. In one study a number of test newspapers were coded by strata, census region, level of newspaper competition, and level of local competition. The regions involved ranged from suburban to large metropolitan areas. Over 39 percent of each stratum as sampled on a random basis. Findings show no important variation in penetration of the newspaper dailies from 1940 to 1970. In 1970 newspapers were reaching about the same percentage of homes as they were in 1940, although there were variations in the regions. The biggest decline was in the circulation of daily newspapers in the highly populated areas, although revenues in the same areas were up. Sunday editions registered a gain of about 10 percent. Despite the stiff competition from television and other media, the daily newspaper in the United States is still flourishing. (DS)

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SOME DEMOGRAPHIC CORRELATES OF CHANGING NEWSPAPER CIRCULATION, 1940 and 1970

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INTRODUCTION

> A newspaper is not merely printed. It is circulated and read. Otherwise it is not a newspaper. The struggle for existence, in the case of the newspaper, has been a struggle for circulation. The newspaper that is not read ceases to be an influence in the community. The power of the press may be roughly measured by the number of people who read it.[1]

> Both newspapers and movies are in the latter stages of diffusion where the curve has already turned down from its apex.[2]

> (Newspaper circulation) did well in the 1940s, exceeding both household and family increases, but since 1950, it has fallen considerably behind the household increases and barely maintained its ratio with the gain in families.[3]

> United States newspapers have exhibited strength and vitality in the post-World War II period. They have successfully adjusted to a rapidly changing society, the introduction of a new communications medium and a change in reading habits. Despite these and other adjustments, the growth of newspapers has generally equalled, and in several ways, exceeded the growth of the economy.... (T)he expansion of circulation and newspaper size should continue.[4]

The circulation of American newspapers has--as can be seen from the quotations above--been viewed in a variety of perspectives, measured with different yardsticks, and evaluated in both optimistic and pessimistic terms. In short, the changing relationships of newspaper circulation to the American public have yet to be defined in language that is anywhere near universally accepted. Thus, the observation of change in the relationships has blurred because of a lack of thorough understanding of the problems and the data available. This study attempted to add some clarity to those relationships in at least some measure.

What led us to the years 1940 and 1970 as the beginning and end points for this study? By 1940, the Great Depression had begun to ease and thus made this a relatively "normal" year and a good starting point for a study of the relationships of newspaper circulation and demographic data. By 1970, a generation of change had transpired and the change in media use patterns wrought by the advent of television were well settled, making it a logical place to take comparative measurements in the circulation and demographic data. The choice of census years insured accurate, comparable data for demographics, and the reports of the Audit Bureau of Circulation (ABC) were also available for many individual newspapers for those years.

The basic research question that guided this study was this: How were changes in American society during the years in question reflected in relationships of circulation and demographic data at the beginning and end of the 30-year period? The cumulative effects of change both from within and without the newspaper industry on those relationships should be measurable and comparable using the available data. Because the newspaper continues to be one of the most important of the modern mass media, because of the rapid and varied changes in American culture in recent history, and finally, because no adequate study has adequately investigated the cumulative effects of societal change on newspaper circulation, it seemed to us important that this study be undertaken. The effect of change during a recent and critical period on the American daily newspaper--already a mature and developed institution by 1940--in terms of its circulation should be describable by matching data for the beginning and ending years.

Measurement of change on a national scale was one obvious goal, but because of the heterogeneous nature of both daily newspapers and the nation's population, the following sub-questions were developed, both as guides to designing the research and as finer, more accurate tools to determine variations and subtleties of change in circulation-demographic relationships.

1. Did circulation penetration increase, decrease, or remain constant with changing population?

2. What was the relationship to circulation of demographic indicators such as number of households and population over 14?

3. Did different regions of the country reflect different relationships between circulation and demographic data?

4. Did size and type of city of publication alter the relationships of demographics and circulation?

5. Did Sunday newspapers reflect different relationships between demographics and circulation than their daily counterparts?

6. Did level of competition, whether from other newspapers or television, make a difference in demographic/circulation relationships?

This study emphasized relationships of newspaper circulation and demographic indicators within defined geographic or political areas. It was, in a sense, a study of ecological adaptation of newspapers to their changing environment, since it used specific data for the same individual newspapers in the two years studied, 1940 and 1970, and attempted to assess the magnitude, meaning and kinds of relationships represented by the data.

PREVIOUS WORK

Most previous studies of circulation-population relationships have dealt in aggregate terms, using gross national data for newspapers and population, although a few have made analyses from other perspectives.

John S. Davenport conducted two studies on long range trends in circulation. The first enumerated 17 separate influences on newspaper circulation, and reviewed circulation trends from 1919 to 1948, noting that circulation gradually and steadily increased in that period, but that influences beyond the control of editors and circulation managers such as the Depression and World War II led to occasional declines and steeper increases in circulation.[5] He later performed a time series analysis of circulation trends for 1919-49, and concluded that (1) daily newspaper circulation has a long run upward trend and (2) cyclical influences such as depressions and other events can operate to vary that trend somewhat over the long run.[6] Wilbur Peterson conducted a study to answer a number of questions about newspaper growth and its relationship to various demographic indicators such as population and households. He noted that circulation does not always increase in proportion to population, and could not always be expected to, because of the same external influences cited by Davenport. He was concerned about--but unable to explain--the decline in the average number of newspapers per household to a level of 1.17 at the time of his study (1957).[7] Lee Ruggels analyzed a variety of factors related to circulation change and demographic characteristics, using a probability sample of school districts from throughout the United States. Among other things, he found the variable of movement correlated with circulation

at -.38 within the county and -.42 within the country, both significant at the .05 level.[8] Analysis of covariance was used by R. K. Thorp in examining relationships between population and circulation for the years 1950-60 using the four U.S. Census regions and the nine smaller census divisions. There was little interaction in the first instance but population and circulation increases showed correlations averaged .52, significant at the .01 level for the divisions.[9] Studies by James Force, Kenneth R. Byerly, and Boyd L. Miller have documented the boom in suburban daily circulation and the leveling of total metropolitan circulation (although it was noted that some individual metro dailies gained).[10]

William A. Hachten's study of Sunday newspapers has documented the changes in both content and circulation of those editors, vis-a-vis their daily versions.[11] Case studies of individual metropolitan areas and their newspapers by Morris L. Janowitz, Jack Lyle, and William L. Rivers and David M. Rubin have described the glut of media and the growth of community newspapers in three SMSAs: Chicago, Los Angeles and San Francisco.[12] A continuing series of studies by Jon G. Udell has established the fact of steady economic growth in the newspaper industry, in terms of employment as an industry, increase in average number of pages, and keeping up with growth of the adult population.[13] Several interesting studies by sociologists and geographers have attempted to explain the relationship of newspaper circulation to the influence of dominance of an urban center over its hinterlands, and have used newspaper circulation patterns as an index of that dominance.[14] Finally, a dissertation by Roy Halverson reviewed the major trends mentioned in circulation and population and concluded that the decline

in circulation per household and per thousand adults on a national scale was tied to substitutes available--chiefly television--and that the marginal utility of purchasing additional newspapers declined despite the ability of the public to purchase more newspapers if they wished.[15]

In summary, previous studies have documented the increase in total circulation of American daily newspapers and their decline in terms of copies per thousand population or dailies purchased per household. At least some of the decline can be traced to the metropolitan dailies, where gains were moderate or non existent, while their suburban counterparts increased sales at a faster rate. But the newspaper as an industry showed no major signs or weakness, continuing to grow at a rate at or above the national average in terms of numbers of people employed or value added through production. Although the number of newspapers leveled off, these newspapers grew in terms of pages per issue in the post-World War II period. The relationship of the daily newspaper to a community has been described in ecological terms by several writers, including some who have indicated the role that newspaper circulation plays in defining the limits of major urban centers.

METHODOLOGY

Terms and Definitions

Circulation Penetration. This is a ratio of the number of copies a given newspaper sells in a defined area over a demographic measure for that same area. For example, it can be expressed in terms of households, total population or adult population for a defined area, related to the number of newspapers sold within the same boundaries (usually political). If, for instance, a given newspaper sold 5,000 copies daily in a county with 10,000 households, the penetration ratio would be 5,000 over 10,000 or .50--50 per cent.

Standard Metropolitan Statistical Area. U.S. Bureau of the Budget definitions for these areas were accepted. There were approximately 230 of them in the country at the time of the 1970 census.[16]

Central City. This refers to the city which forms the nucleus of a given SMSA. The central city was determined from the titles and definitions of SMSAs. Thus, the central city of the Bridgeport, Conn. is Bridgeport. In the case of SMSAs which have been formed by joining more than one city, such as the Minneapolis-St. Paul SMSA or the Los Angeles-Long Beach SMSA, each city named in the SMSA title was considered a central city.

Daily Newspaper. In this study, this refers to a general circulation, English-language newspaper published five or more times per week. The two "national" newspapers published in the United States --

the Wall Street Journal and the Christian Science Monitor -- were excluded from this study. The New York Times is frequently regarded as a national newspaper, but it was categorized as a central city daily for purposes of this study.

Suburban. Dailies which regarded their publishing headquarters as being within an SMSA but outside a central city were treated as being suburban.

Non-metropolitan. Dailies which were published in cities outside a defined SMSA were regarded as being non-metropolitan.

Data Collection

Newspaper circulation data for the two years, 1940 and 1970, was taken from Audit Bureau of Circulation audit reports, which give average annual circulation data for all major and many minor political subdivisions over a specified 12-month period. They are the most accurate source for determining the number of newspapers sold and the point of sale, because the records used by member newspapers in compiling the reports are audited by ABC field representatives for accuracy. United States census reports for 1940 and 1970 provided the demographic data.

The following information for both 1940 and 1970 was gathered for each newspaper selected:

Daily home county circulation
Daily SMSA circulation (where applicable)
Daily total circulation
Sunday home county circulation
Sunday SMSA circulation (where applicable)
Sunday total circulation

The following demographic data for the city, county and SMSA (where applicable) for each newspaper selected was gathered for both 1940 and 1970:

Home county population
SMSA population
Home county population over 14
SMSA population over 14
Home county OHU
SMSA OHU

The 1970 SMSA and home county boundaries were used as a basis for collection of data for both 1940 and 1970. Although county boundaries did not change between the two years, there was considerable change in both the number and boundaries of SMSAs. Therefore, the 1970 boundaries were used to insure comparability of data.

Additionally, newspapers were coded by strata (discussed below), census region, level of local newspaper competition, and level of local television competition.

Newspapers published in cities where there was no other locally published daily, or where a second newspaper was owned by the same organization were coded as "low competition" newspapers. Where competition was not owned or where there were agency agreements to pool all departments of the two newspapers such as mechanical and advertising except for the editorial departments, the newspaper was classified as having "high competition."

For television competition, newspapers published where there were no local TV outlets or where there was one that was owned by the newspaper were classified as "low competition." Where any of the following conditions obtained, the TV competition was coded as "high": one local

TV station, not owned by the newspaper; more than one local station, newspaper owning none; more than one local station, newspaper owning one.

Sample Selection

A stratified random sample was selected from daily newspapers which were (1) published in both 1940 and 1970 and (2) ABC members in both years. ABC membership was required as a condition for inclusion in the population to be sampled because only ABC reports were reliable enough and sufficiently detailed for the purposes of this study.

The newspapers meeting these requirements were divided into six strata, based on their 1970 population:

1. Suburban
2. Non-metropolitan, 10,000 to 25,000 population
3. Non-metropolitan, 25,000 and above population
4. Central city, small SMSA, under 250,000 population
5. Central city, medium SMSA from 250,000 to 1,000,000 population
6. Central city, large SMSA, population 1,000,000 and over.

Excluded from consideration and inclusion in this study were newspapers published in cities of under 10,000 population. Although these communities contain a large number of dailies, the percentage of total newspaper circulation is relatively small. In addition, and just as important, the number of dailies who were ABC members in both years is small in the under 10,000 cities, preventing any meaningful representation from newspapers published in cities of this size.

This selection procedure left us with a total population of 727 newspapers meeting the criteria. Gathering data for all 727 appeared unnecessary, although as large a sample as possible was desirable. A

pre-test of the data gathering procedure indicated it would be reasonably efficient to gather data for more than a third of the cases. Thirty-nine per cent of each stratum was sampled on a random basis. This procedure produced the following number of cases for each stratum:

Stratum	Population	Sample
1	76	30
2	154	60
3	117	46
4	139	54
5	163	64
6	78	30
	727	284

Key punched data was run at the University of Georgia Computer Center on an IBM 360, using a descriptive computation program, BMD02D, Correlation with Transgeneration, one of a series of biomedical computer programs developed at the University of California at Los Angeles Medical Center.[17]

FINDINGS

1. There was no significant difference in overall circulation penetration for dailies when the years 1940 and 1970 were compared.

Table 1 shows the result of t-tests on penetration for the two years within home counties. In 1940, the average penetration for all 284 newspapers sampled was 46.2 per cent. For 1970, it was 48.8 per cent, and there was no statistical significance in the difference. Despite all the change between the two years, newspapers were doing about as well as they were at the end as they were at the beginning of the period.

Differences did begin to appear, however, when individual stratum were examined. (See columns 5 and 6, Table 11.) Suburban newspapers increased penetration about 4 per cent, small non-metropolitan 11 per cent and large non-metropolitan 9 per cent within their home counties. Of particular interest is the decline in circulation penetration on the part of dailies published in large SMSAs, both within the home county and SMSA. Analyses of variance for 1970 home county and SMSA penetration, respectively, showed a significant difference in the circulation penetration for small, medium and large SMSA dailies. (See Tables 2 and 3.) Further, the drops in penetration between 1940 and 1970 for the large SMSA dailies from 48 to 39 per cent within home counties, and from 40 to 30 per cent within the SMSA, were both significant at the .05 level.

2. Increases in population over age 14 and number of households correlated positively with circulation gains, in general; different regions and city sizes reflected varying correlational patterns, however. (See Table 4.)

For the total sample, the correlations were definite but small. The home county population-circulation correlation was .323, significant at .001; population over 14 to circulation was .349, significant at .001; and OHU to circulation was .308, significant at .01.

When considered by population categories or regional groupings, there is considerable difference shown in the correlation coefficients.

For suburban newspapers, the relationship of home county population and circulation increases, and home county population over 14 and circulation were .369 and .37, respectively, both significant at .05. For OHUs, it was .355, also significant at .05 -- all definite but small relationships. Within the SMSAs, population and circulation showed a .393 correlation, and population over 14 a .397, both significant at .05. The OHU-circulation relationship was .297, which was not statistically significant.

Both the non-metropolitan strata showed positive correlations, though considerably different. The smaller non-metropolitan group showed correlations of .399, .435, and .355, for home county population, home county population over 14, and home county OHU increases related to circulation increases. The first and last figures were significant at .01 and the middle at .001. The larger non-metropolitan dailies reflected much stronger correlations for the same variables, all substantial and significant at the .001 level. Home county population-circulation was .660, population over 14-circulation .693, and OHU-circulation .562.

For medium SMSA newspapers, home county population-circulation showed a marked relationship, .739, significant at .001. The home county population over 14-circulation correlation was weaker, though definite, at .319, significant at .05. For OHU-circulation, it was a substantial .649, significant at .001. Relationships of the three variables to circulation in the SMSAs for this group were all significant at the .001 level, and showed a substantial relationship. Population increases to circulation correlated at .605, increases in population over 14 at .569, and increases in OHUs at .538.

The large SMSA findings on these three variables were considerably weaker, showing small relationships, though few were statistically significant. Within home counties, population to circulation was .315, population over 14 to circulation .382, and OHU increases to circulation .290. Within the SMSA limits, similar small relationships were found. Population increases and circulation gains correlated at .256, population over 14 and circulation at .299, and OHU and circulation increases at .295. The only significant relationship was between population over 14 and circulation within the home county, at the .05 level.

When region was used as a control (See Table 5), a different pattern of correlations emerged. In general, increases in home county OHUs appeared to provide the most consistent and strongest correlations with circulation increases.

In region 1, the Northeast, increases in population over 14 and circulation showed a small but definite relationship of .383, significant at .01. OHU to circulation relationship was .664, significant at .001, and the population increase to circulation was .585, significant at .001.

In region 2, the North Central, a varied pattern of relationships was found. Increases in population over 14 to circulation was negligible, .016. For OHU increase to circulation it was a -.436, significant at .001. The population-circulation relationship was -.277, significant at the .01 level. This was the only region to show negative relationships between any of the three variables, and circulation increases. Region 3 -- the South -- showed substantial to marked relationships for the three variables, all positive, all significant at the .001 level. Population over 14 to circulation was .52, home county OHU to circulation .729, and population to circulation .809. Finally, relationships for region 4 -- the West -- were similar, although not quite so strong as region 3, all significant at the .001 level. Population over 14 to circulation was .469, OHU to circulation .468 and population to circulation .467.

Partial correlations with the variables of circulation increase, total population increase, and population over 14 increase were also computed, removing the effects of the over 14 population increase, thus, in effect, leaving the relationship of the increase of population under 14 increase to circulation increase. In general, these correlations were non existent, weak or negative (see columns 3 and 7, Table 4), indicating that this portion of the population was of little consequence in building circulation. One of the major exceptions to this finding was in the medium sized SMSAs where the circulation increase-population under 14 increase relationship was .726, significant at the .001 level. In the regional comparisons (See column 3, Table 5), the Northeast and South reflected strong positive relationships, .655 and .728, respectively, significant at .001. A -.415 was found in

the North Central region, also significant at .001. This divergence is not explainable by the data gathered or method used here. In the case of the regional comparisons, a further breakdown of the regions into divisions might prove fruitful in pinpointing where the differences within region take place.

3. Sunday newspapers outperformed their daily counterparts, in circulation penetration and circulation gains.

Figures for all 284 dailies included in the study were compared with those for the Sunday editions published by any of those dailies, numbering 134. For both years, Sunday newspapers showed significantly higher home county circulation penetration for OHUs. (See table 6.) Dailies reached a mean of 46.18 per cent of homes in their home counties in 1940, and Sunday editions 58.5. In 1970, dailies reached 48.9 per cent, and Sunday editions 68.6. Differences in both years were significant at the .0005 level. Additionally, the slight increase in home county penetration (about 2.7 per cent) was not significant for daily editions, while the 10 per cent increase registered by Sunday newspapers was significant at the .0005 level. Given the lesser number of Sunday newspapers published in the nation as opposed to dailies (1784 against 586 in 1970), one might logically expect a higher circulation penetration on the part of the Sunday editions. The declining numbers of dailies from the beginning to the end of the 30-year period -- from 1,878 to 1,784 -- might also logically expect one to note an increase in circulation penetration by the remaining dailies, but this is not the case as we have seen here. A full exploration for the reasons behind the success of Sunday newspapers from 1940 to 1970 is beyond the scope of this study, but the data presented does establish

their unique ability to increase acceptance on the part of readers, vis-a-vis the apparent inability of daily newspapers to make significant gains, when considered in the aggregate.

4. Suburban newspapers showed significantly higher circulation gains than any other population grouping. As has been documented in other studies, the suburban dailies have shown special strength in recent years, and this is supported here. Analysis of variance for percentage gains both within home counties and totally showed that there were real differences between the population groupings, significant at the .001 and .01 level, respectively. (See Tables 7 and 8.) Suburban newspapers gained 279 per cent within their home counties, on the average, while newspapers in medium SMSAs gained 155 per cent, the second highest gain. Overall, suburban papers had the biggest gains also -- 226 per cent and large non-metropolitan newspapers were the second highest gainers here, at 137 per cent. Smaller non-metro dailies recorded the lowest percentage gain within their home counties -- 99.46 -- of any group. They were well below the larger non-metros at 119.73. The second highest home county gains were recorded by the dailies in the medium sized SMSA strata, at 155.05 per cent, well above small gaines of 109.66 per cent and large SMSA gains of 108.87.

When total circulation is compared, the small SMSA group fared the worst, with a 102.18 per cent increase. The medium SMSA group had the largest gains of the SMSA groupings, 134.69 per cent. Large SMSA dailies gained 110.47 per cent. Gains of the large non-metropolitan group were 136.95 per cent, only slightly above the medium SMSA strata.

The weakness of non-metropolitan dailies may be due to at least two factors. First, there has been a general stability on the part of newspapers in these two groupings. They are generally dailies with no competition, and they have had fewer failures, relative to the other groups.

5. There was little evidence that television had adversely affected newspaper circulation.

T-tests for circulation penetration of high and low television competition groups were not statistically significant, and neither were t-tests for percentages of circulation gain for the two groups. However, tests for differences in mean circulation gains, both in home county and totally, were significant, with high TV competition newspapers showing the higher gains. (See Table 9.) Two explanations are possible. First, the high competition newspapers tended to come from the larger cities where the newspapers were of larger size, circulation wise. An alternative explanation would be that the increased number of television viewing opportunities brought about by higher competition encouraged a higher degree of newspaper readership. The former would appear to be a more plausible explanation for the data in this instance.

6. Competition appears to have some effect on home county circulation penetration.

Newspapers published where there was low newspaper competition (249 of those sampled fell in this category) had an average penetration of 49.5 per cent, while the high competition group (numbering 35) reached only 42.5 per cent of the homes in their county, on the average. This difference was significant at the .01 level (see Table

10.) This substantiates the common-sense notion that it is more difficult to sell newspapers where there is a competitor around doing the same thing. Given the other many forms of competition for the reader's time ranging from television to increased leisure time, it seems apparent that there are fewer two-newspaper families than in earlier days.

CONCLUSIONS

The primary purpose of this study was to assess relationships of certain demographic indicators and circulation data for a sample of American daily newspapers to measure the effect of change in American society at the beginning and end of a 30-year period on one of the country's mass media.

The basic assessment that arises from an examination of the data gathered and analyzed is that the newspapers represented by the sample here, with some few exceptions, adjusted sufficiently to change so that they continued to be accepted by about the same fraction of their potential audience. Despite the many changes which may have taken place in the newspapers themselves and the environment in which they operated, they still reached about the same percentage of homes each day in 1970 as they did in 1940. The exceptions to this generality were few. Regional comparisons showed significant differences in circulation penetration and circulation increases between regions. (See Table 11.) The Northeast had the lowest penetration in both years, about 30 per cent, while the North Central had the highest, about 60 per cent. For the South and West, the penetration was about 45 per cent. The west had the highest percentage of circulation gain, 129, while the Northeast had 65, the North Central region 87 and the South 90. But although the penetration differed between regions and the percentage of gain was different, there was little change in the circulation penetration between the two years studied, 1940 and 1970, within the regions themselves. Only when newspapers were segregated by population size did

significant changes appear in the circulation penetration in 1970 as compared to 1940; there, the newspapers at either end of the population scale showed significant differences in OHU penetration over the two years. Non-metropolitan newspapers gained, and the large SMSA dailies lost in terms of penetration. While the differences were perceptible, they were not extremely large: plus 11 and 9 per cent, respectively, for small and large non-metropolitan dailies, and minus 10 per cent for large SMSA dailies. Additionally, Sunday editions showed a healthy increase. But the basic conclusion for the newspapers studied remained that their circulation patterns were about the same at the beginning and end of the 30-year period, with the exception of the variations noted.

One may view this conclusion in either negative or positive terms. From the negative standpoint, it meant that newspapers had been running hard to stand still. Circulation promotion efforts, conscious changes in content and format to meet the interests and needs of a changed readership, improved quality brought about by improved printing technology, and a decline in numbers of competitive newspapers failed to gain a significant share of additional readers, on the average. From the positive side, it is something of a triumph that newspapers prospered as well as they did, given the historical record of social, political, economic and cultural changes that transpired in American society during the time period. Further, having faced a new, slick, sophisticated and multi-sensual medium such as television as a competitor, and a more aware and affluent population, it could be viewed as a minor miracle that readership of a medium aimed at a mass audience did not decline considerably.

Table 11 illustrates this general assessment. Columns one through three and seven through nine indicate the average percentage increases in certain demographic variables for the total sample, population strata, regional groupings, and Sunday editions. Columns four, ten and thirteen show percentage increases in circulation. The variation in these figures is considerable. Yet, the OHU circulation penetration (columns four, five eleven and twelve) varied significantly only in the smallest and largest population groupings, and not at all in regional comparisons. In the midst of a communications explosion and revolution, the daily newspaper seemed to continue to serve some useful communications function, despite changes in society as well as communications media and channels. It is possible that the function and role of the newspaper had changed between 1940 and 1970, but if this was so, it did not result in obsolescence for the newspaper. While this conclusion is not startling in and of itself, it deflates somewhat the McLuhanesque philosophy that the linear world of print is dead or dying, as well as the critics of media content and practice who have said that the American newspaper is irrelevant and fading as an institution.[18] The data gathered here lend no support to these kinds of assumptions. Rather, they seem to make the words of sociologist Robert Park (quoted earlier) ring more true:

> The newspaper . . . is not wholly a rational product. No one sought to make it just what it is. In spite of all the efforts of individual men and generations of men to control it and to make it something after their own heart, it has continued to grow and change in its own incalculable ways.
>
> The type of newspaper that exists is the type that has survived under the conditions of modern life . . . .
>
> . . . The struggle for existence, in the case of the newspaper, has been a struggle for circulation. The newspaper that is not read ceases to be an influence in the community. The power of the press may be roughly measured by the number of people who read it.[19]

In the case of the newspapers studied here, their "power" in terms of readership seemed to be about the same in 1970 as it was in 1940. While it obviously had to share the time available to its readers in different ways than it did in 1940, the newspaper was still capturing the attention of about the same proportion of readers.

A number of other conclusions were reached, based on the findings of this study.

Despite the general conclusion of "no change" or "status quo" described above, the differences uncovered are important because they indicate the changing and diverse side of American newspapers, in terms of their ability to attract and hold readers. Newspapers published in small, non-metropolitan cities found themselves in counties which showed the lowest percentage increases in total population and OHUs, compared to other population strata. Yet, they were able to put newspapers on the doorsteps of a larger proportion of homes at the end of the 30-year period. The biggest decline in circulation penetration was found in a stratum that had increased its population percentage and OHU percentage more than any other stratum: the large SMSAs. Additionally, competition decreased markedly in this latter group. City size, then, becomes an important variable in predicting the ability of a newspaper to gain, keep and improve its acceptance by readers.

The data gathered for this study also led us to the conclusion that a key (perhaps "the" key) statistic for use in newspaper circulation studies must be the occupied housing unit and its relation to circulation. Creating a ratio of circulation penetration by placing the circulation over the number of homes for that area gave us a

measurement tool which appeared as useful or more so than any other yardstick, particularly for studying growth, over time.

That the large urban daily was in a slow decline in circulation was another conclusion. Although the competition in the large SMSA population group had declined over the period studied, they were reaching a smaller percentage of homes by 1970, both in their home counties and in the SMSAs. In Park's terms, their power had diminished, by approximately 10 per cent in both instances, at least in terms of the audience for which one might logically expect they would have the most appeal. As the focal point for SMSAs, central city dailies published there have the opportunity to attract the people who live within that SMSA by their content and coverage. But meeting the opportunity, however, was something else. Competition from suburban dailies, disenchantment with media and disinterest by many who live within the SMSA limits have apparently led readers elsewhere. Although data for advertising and related matters was not included as part of this study, a reference to this aspect of large urban dailies must be made. Although many of the newspapers have failed to show significant gains in readership over the years studied, they have registered sizeable gains in advertising lineage and revenue and appear in no immediate danger of financial collapse, as a decline in readership might indicate. Many -- indeed, most -- have grown faster in advertising and total number of pages than in circulation gains. As an extreme example, the Chicago Tribune declined in circulation from 1940 to 1970, as follows:[20]

	Home County	SMSA	Total
1940	736,000	791,300	991,300
1970	483,600	598,600	772,700

Yet, advertising linage continued to increase, more than tripling for both daily and Sunday editions during the same period:

	Total Daily Linage	Total Sunday Linage
1940	13,016,700	7,751,600
1970	49,501,300	25,289,600

In addition, no claim for a decline in influence in the life of the SMSA in which they publish is proposed here for newspapers in the large urban centers. Because they are still an important part of the communications network in their city and SMSA, they continue to be highly regarded, if only out of necessity.

Finally, a conclusion on Sunday newspapers: Their growth in terms of circulation and size had made them a medium that needs to be considered apart from daily newspapers. In 1940 they reached a higher proportion of homes than did any strata of daily newspapers, whether viewed by population strata or region, 58 per cent. By 1970 that penetration had increased 10 per cent to 68. Added to this high local readership is a wide circulation outside of home counties and SMSAs that often is a large fraction of their total Sunday circulation. For example, the percentage of circulation that was outside the SMSA limits in 1970 for these Sunday newspapers is as follows: Denver Post, 32; Atlanta Journal-Constitution, 42; Indianapolis Star, 35; Boston Globe, 32; Minneapolis Star-Tribune, 52; New York Times, 53; Portland Oregonian, 38. It is true that in some instances the added circulation comes about because these central city dailies fill a gap left where smaller dailies do not publish Sunday editions, and that some of them expand circulation because of a Sunday edition combining two non-competitive newspapers under the same ownership

(e.g., the Atlanta Journal-Constitution). Whatever the reason, the effect is the same: a widening circulation and possible zone of influence for the Sunday newspapers.

TABLE 1

T-TESTS FOR CIRCULATION PENETRATION, DAILY NEWSPAPERS, 1940 AND 1970

OHU circulation penetration, home county, dailies, 1940 and 1970

	1940	1970
M:	.4618	.4883
SD:	.2199	.2358
n:	284	284

t=1.325(n.s.)

TABLE 2

SUMMARY DATA AND ANALYSIS OF VARIANCE, 1970 OCCUPIED HOUSING UNIT CIRCULATION PENETRATION FOR HOME COUNTY, BY SMSA SIZE

	SMALL		MEDIUM		LARGE
n:	54		64		30
M:	.5115		.4683		.3921
Source	df	s.s.	m.s.	F	
Between Groups	2	.33	.16	5.33	(.01)
Within Groups	145	4.92	.03		
Total	147	5.25			

TABLE 3

SUMMARY DATA AND ANALYSIS OF VARIANCE, 1970 OCCUPIED HOUSING UNIT CIRCULATION PENETRATION FOR SMSAs, BY SMSA SIZE

	SMALL		MEDIUM		LARGE
n:	54		64		30
M:	.5162		.4265		.3057
Source	df	s.s.	m.s.	F	
Between Groups	2	.86	.43	14.33	(.001)
Within Groups	145	14.33	.03		
Total	147	15.19			

TABLE 4

CORRELATION MATRIX OF SELECTED VARIABLES RELATED TO POPULATION, POPULATION OVER 14 AND OHU INCREASES, WITH CIRCULATION INCREASES

	1	2	3	4	5	6	7	8
TOTAL (n=284)								
Increase in home co. circ.	.322***	349***	-.024					
SUBURBAN (n=30)								
Increase in home co. circ.	.369*	37*	-.076	.355*				
Increase in SMSA circ.					.393*	.397*	.017	.297
SMALL NON-METROPOLITAN (n=60)								
Increase in home co. circ.	.399**	435***	-.144	.355**				
LARGE NON-METROPOLITAN (n=46)								
Increase in home co. circ.	.66***	693***	-.275	.562**				
SMALL SMSAs (n=54)								
Inc. in home co. circ.	.229	226	.062	.432***				
Inc. in SMSA circ.					.206	.557***	.06	.612***
MEDIUM SMSAs (n=64)								
Inc. in home co. circ.	.739***	319*	.726***	.649***				
Inc. in SMSA circ.					.605***	.569**	.366**	.538***
LARGE SMSAs (n=30)								
Inc. in home co. circ.	.315	382*	-.064	.29				
Inc. in SMSA circ.					.256	.299	.216	.295

TABLE 4, CONTINUED

Col. 1=Increase in home co. pop.
Col. 2=Increase in home co. pop over 14
Col. 3=Partial correlation, removing effect of pop. over 14 inc. from home co. pop increase-circulation increase
Col. 4=Increase in home co. OHUs
Col. 5=Increase in SMSA pop.
Col. 6=Increase in SMSA po. over 14
Col. 7=Partial correlation, removing effect of SMSA pop. over 14 inc. from SMSA pop. increase-circulation increase
Col. 8=Increase in SMSA OHUs

*Significant at .05
**Significant at .01
***Significant at .001

TABLE 5

CORRELATION MATRIX OF SELECTED VARIABLES RELATED TO POPULATION POPULATION OVER 14, AND OHU INCREASES, WITH CIRCULATION INCREASES, FOR CENSUS REGIONS

	1	2	3	4
REGION 1--Northeast (n=63) Inc. in home co. circ.	.585***	.383**	.655***	.664***
REGION 2--North Central (n=96) Inc. in home co. circ.	-.277**	.015	-.415***	-.436
REGION 3--South (n=79) Inc. in home co. circ.	.809***	.530***	.729***	.73***
REGION 4--West (n=46) Inc. in home co. circ.	.467***	.469***	-.16	.468***

Col. 1=Increase in home co. pop.
Col. 2=Increase in home co. pop. over 14
Col. 3=Partial correlation, removing effect of pop. over 14 inc. from home co. pop. increase-circulation increase
Col. 4=Increase in home co. OHUs

*Significant at .05
**Significant at .01
***Significant at .001

TABLE 6

T-TESTS FOR CIRCULATION PENETRATION AND INCREASES,
SUNDAY NEWSPAPERS, 1940 AND 1970

OHU circulation penetration, home county, 1940

	Daily editions	Sunday editions
M:	.4618	.585
SD:	.2199	.1822
n:	284	134

t=7.1132 (.0005)

OHU circulation penetration, home county, 1970

	Daily editions	Sunday editions
M:	.4883	.6857
SD:	.2358	.204
n:	284	134

t=8.852 (.0005)

Mean home county circulation increases, 1940 to 1970

	Daily editions	Sunday editions
M:	170.0458	358.0894
SD:	286.0999	452.7732
n:	284	134

t=4.4005 (.0005)

Mean total circulation increases, 1940 to 1970

	Daily editions	Sunday editions
M:	251.8732	681.3655
SD:	431.4868	979.563
n:	284	134

t=5.6473 (.0005)

OHU circulation penetration, home county, dailies, 1940 and 1970

	1940	1970
M:	.4618	.4883
SD:	.2199	.2358
n:	284	284

t=1.325 (n.s.)

OHU circulation penetration, home county, Sunday editions, 1940 and 1970

	1940	1970
M:	.585	.6857
SD:	.1822	.204
n:	134	134

t=4.5156 (.0005)

TABLE 7

SUMMARY OF DATA AND ANALYSIS OF VARIANCE FOR COMPARISON OF PERCENTAGE OF CIRCULATION GAIN BY POPULATION STRATA FOR HOME COUNTY CIRCULATION, 1940 TO 1970

	Suburban	Small Non-Met.	Large Non-Met.	Small SMSAs	Medium SMSAs	Large SMSAs
n:	30	60	46	54	64	30
M:	2.7886	.9946	1.1973	1.0966	1.5505	1.0887
SD:	3.7883	1.0274	1.0706	1.0931	1.3525	1.3795

Source	df	s.s.	m.s.	F
Between Grps.	5	78.7034	15.7406	5.602 (.001)
Within Grps.	278	781.1514	2.8098	
Total	283	859.8548		

TABLE 8

SUMMARY OF DATA AND ANALYSIS OF VARIANCE FOR COMPARISON OF PERCENTAGE OF CIRCULATION GAIN BY POPULATION STRATA FOR TOTAL CIRCULATION, 1940 TO 1970

	Suburban	Small Non-Met.	Large Non-Met.	Small SMSAs	Medium SMSAs	Large SMSAs
n:	30	60	46	54	64	30
M:	2.2607	1.1288	1.3695	1.0218	1.3469	1.1047
SD:	2.5137	1.1966	1.2373	1.1021	1.3016	1.2979

Source	df	s.s.	m.s.	F
Between Grps.	5	35.4242	7.0848	3.4527 (.01)
Within Grps.	278	570.4510	2.0519	
Total	283	605.8752		

TABLE 9

T-TESTS FOR COMPARISON OF CIRCULATION INCREASES, HOME COUNTY AND TOTALLY, BETWEEN NEWSPAPERS WITH HIGH AND LOW TV COMPETITION

	High TV competition	Low TV competition
Mean home county circulation increases, 1940 to 1970		
M:	228.9809	97.189
SD:	364.0027	100.6081
n:	157	127
	t=4.3364 (.0005)	
Mean total circulation increases, 1940 to 1970		
M:	360.9871	116.9842
SD:	546.9197	121.0521
n:	157	127
	t=21.0072 (.0005)	

TABLE 10

T-TEST FOR COMPARISON OF OHU CIRCULATION PENETRATION, HOME COUNTY, FOR 1970, FOR HIGH AND LOW NEWSPAPER COMPETITION

OHU circulation penetration, 1970, home county		
M:	.425	.4951
SD:	.1418	.2428
n:	35	249
	t=2.47 (.01)	

TABLE 11

SUMMARY OF CIRCULATION AND DEMOGRAPHIC DATA

	1	2	3	4	5	6	7	8	9	10	11	12	13
Total sample	77.91	69.77	104.92	137.15	46.18	48.65							131.42
Suburban	106.26	88.92	138.81	278.86	16.35	20.03	54.24	49.24	89.85	225.39	4.73	5.93	226.07
Small non-met.	19.03	15.43	46.30	99.46	47.45	58.89							112.88
Large non-met.	46.75	40.02	70.47	119.73	50.54	52.68							136.95
Small SMSA	78.20	67.63	87.22	109.66	51.85	51.15	81.33	53.42	83.35	118.68	50.19	51.62	102.18
Medium SMSA	103.96	102.02	136.12	155.05	49.89	46.83	98.02	83.60	130.57	167.87	44.87	42.65	134.69
Large SMSA	59.69	25.74	84.30	108.87	48.69	39.21	88.13	72.46	122.15	112.83	40.36	30.57	110.47
Region 1 (N. East)	27.33	19.01	58.61	79.50	30.08	32.65							65.82
Region 2 (N. Cen.)	63.02	58.94	76.66	84.03	59.17	62.18							87.40
Region 3 (South)	91.15	100.30	129.80	95.72	45.99	45.97							90.14
Region 4 (West)	171.64	145.23	183.44	130.27	41.45	46.94							129.89
Sunday editions				164.82	58.50	68.57							168.02

1. % inc. in home co. population
2. % inc. in home co. pop. over 14
3. % inc. in home co. OHU
4. % inc. in home co. circulation
5. Home co. OHU circulation penetration, 1940
6. Home co. OHU circulation penetration, 1970
7. % inc. in SMSA population
8. % inc. in SMSA pop. over 14
9. % inc. in SMSA OHU
10. % inc. in SMSA circulation
11. SMSA OHU circulation penetration, 1940
12. SMSA OHUcirculation penetration, 1970
13. % inc. in total circulation

Footnotes

1 Robert E. Park, "The Natural History of the Newspaper," in The City, by Robert E. Park, Ernest W. Burgess and R. D. McKenzie (Chicago: University of Chicago Press, 1967. Originally published 1925), p. 80.

2 Maxwell E. McCombs, "Mass Media in the Marketplace," Journalism Monographs, No. 24 (1972), p. 32.

3 Wilbur Peterson, "Is Daily Circulation Keeping Pace with the Nation's Growth?" Journalism Quarterly, 36 (1959), p. 12.

4 Jon G. Udell, Economic Trends in the Daily Newspaper Business, 1946 to 1970, American Newspaper Publishers Association, Wisconsin Project Reports, Madison, Wis., Vol. 6, No. 6, 1970, p. 13.

5 Newspaper Circulation: Backbone of the Industry (Dubuque: Wm. C. Brown Co., 1949).

6 "Trends and Cycles in Daily Newspaper Circulation," Journalism Quarterly, 27 (1950), pp. 282-89.

7 Peterson, "Is Daily Circulation Keeping Pace with the Nation's Growth?" p. 12.

8 "Some Correlates of Newspaper Circulation Change," unpublished paper prepared for presentation at the Association for Education in Journalism convention, Iowa City, Iowa, August, 1966.

9 "Testing a Generality About Circulation Data," Journalism Quarterly, 38 (1962), 219-221.

10 James Force, "The Daily Press in Suburbia: Trends in 15 Metropolitan Areas," Journalism Quarterly, 39 (1961), pp. 457-463+, and "Correlates of Suburban Daily Circulation Change in 21 Metropolitan Areas, 1940-1960," unpublished M. S. thesis, University of Wisconsin-Madison, 1963; Kenneth R. Byerly, Metropolitan and Community Daily Newspapers: A Comparison of Their Number, Circulation and Trends for 1950, 1960 and 1968 in the Nation's 21 Most Populous Metropolitan Areas (Monograph), School of Journalism, University of North Carolina, Chapel Hill, 1968; Boyd L. Miller, "More Dailies Zoning for Suburban Readers," Journalism Quarterly, 42 (1965), pp. 460-462.

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12 Morris L. Janowitz, The Community Press in an Urban Setting (Chicago: University of Chicago Press), 2nd Ed., 1967; Jack Lyle, The News in Megalopolis (San Francisco: Chandler Publishing Co., 1967); William L. Rivers and David M. Rubin, A Region's Press: Anatomy of Newspaper in the San Francisco Bay Area (Berkeley: Institute of Government Studies, 1971).

13 The Growth of the American Daily Newspaper, American Newspaper Publishers Association, Wisconsin Project Reports, Madison, Vol. 3, No. 1, 1965, and Economic Trends in the Daily Newspaper Business, 1946 to 1970.

14 See, for instance, Park, "The Natural History of the Newspaper," "Urbanization and Newspaper Circulation," American Journal of Sociology, 35 (1929), pp. 60-79, and "Newspaper Circulation and Metropolitan Regions," in The Metropolitan Community, ed. R. D. McKenzie (New York: 1933); Selden C. Menefee, "Newspaper Circulation and Urban Regions," Sociology and Social Research, 21 (1936-7), pp. 63-66; Howard L. Green, "Hinterland Boundaries of New York City and Boston in Southern New England," in Readings in Urban Geography, ed. Harold M. Mayer and Clyde F. Kohn (Chicago, University of Chicago Press, 1959); and James H. Johnson, Urban Geography (Oxford, England: Pergamon Press, 1967).

15 "Trends in Daily Newspaper Circulation," unpublished Ph. D. Thesis, University of Illinois-Champaign, 1970.

16 Executive Office of the President, Bureau of the Budget, Standard Metropolitan Statistical Areas (Government Printing Office, Washington, D. C., 1967).

17 W. J. Dixon, ed., BMD: Biomedical Computer Programs (Berkeley: University of California Press, 1970).

18 For instance, Carl E. Lindstrom, former editor of the Hartford Times, wrote in The Fading American Newspaper (New York: Doubleday and Co., 1960), p. 13: "A man no longer needs to read a daily newspaper inorder to be well informed. Conversely, no single newspaper, with two or three brilliant exceptions, will bring an educated man anything like all he needs to know of his city, the nation and the world."

19 "The Natural History of the Newspaper," in The City, by Robert E. Park, Ernest W. Burgess and R. D. McKenzie (Chicago: University of Chicago Press, 1967. Originally published 1925), p. 80.

20 Sources: Audit Bureau of Circulation Audit Reports, 1940 and 1970; Media Records, Year 1940 and Year 1970.